

PATENT  
Serial No. 10/517,918  
Amendment in Reply to Final Office Action mailed on August 24, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of recording marks representing data in an information layer of a record carrier by irradiating the information layer by means of a pulsed radiation beam, each mark being written by a sequence of pulses, the recorded marks being erasable by irradiating the information layer with an erase radiation beam,

wherein said erase radiation beam between two successive sequences of pulses for writing marks consists of only three ~~consecutive erase periods that together substantially fill the period between the two successive sequences of pulses for writing marks,~~ and wherein said erase radiation beam has a first erase power level for a first erase period, a second erase power level higher than or equal to said first erase power level for a second

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erase period, and a third erase power level lower than said second erase power level for a third erase period.

2. (Currently Amended) A-The method as claimed in claim 1, wherein said third erase power level is lower than said first erase power level.

3. (Currently Amended) A-The method as claimed in claim 1, wherein said first erase power level and said third erase power level are substantially equal and lower than said second erase power level.

4. (Currently Amended) A-The method as claimed in claim 1, wherein said second erase power level is lower than the write power level (w) of said pulses of said pulsed radiation beam for recording marks.

5. (Currently Amended) A-The method as claimed in claim 1, wherein said third erase power level is higher than the bias power level (b) between said pulses of said pulsed radiation beam

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for recording marks.

6. (Currently Amended) A-The method as claimed in claim 1, wherein said first erase period and said second erase period are shorter than said third erase period.

7. (Currently Amended) A-The method as claimed in claim 1, wherein the sum of said first erase period and said second erase period is shorter than half the shortest mark being recorded.

8. (Currently Amended) A-The method as claimed in claim 1, wherein said information layer has a phase which is reversibly changeable between a crystal phase and an amorphous phase.

9. (Currently Amended) A-The method as claimed in claim 1, wherein said record carrier comprises at least two information layers.

10. (Currently Amended) A-The method as claimed in claim 9, wherein at least one of said at least two information layers

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is an at least partially transparent layer.

11. (Currently amended) A recording device for recording marks representing data in an information layer of a record carrier by irradiating the information layer by means of a pulsed radiation beam, the device comprising a radiation source providing said radiation beam and a control unit for controlling the power of said radiation beam, such that each mark is written by a sequence of pulses and the recorded marks are erasable by irradiating the information layer with an erase radiation beam,

wherein a control unit is operative for controlling said radiation beam such that said erase radiation beam between two successive sequences of pulses for writing marks consists of only ~~three consecutive erase periods that together substantially fill the period between the two successive sequences of pulses for writing marks,~~ and wherein said erase radiation beam has a first erase power level for a first erase period a second erase power level higher than or equal to said first erase power level for a second erase period, and a third erase power level lower than said second erase power level for a third erase period.

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12. (Currently Amended) A The recording device as claimed in claim 11,

wherein said control unit is operative for controlling said radiation beam such that the third erase power level is lower than the first erase power level.

13. (Currently Amended) A The recording device as claimed in claim 11,

wherein said control unit is operative for controlling said radiation beam such that the first erase power level and the third erase power level are substantially equal and lower than the second erase power level.

14. (Currently Amended) A method of recording marks ~~representing data in an information layer of on a record carrier,~~  
the method comprising the acts of: by

irradiating the information layer by means of a pulsed record carrier with a radiation beam, each mark being written by a sequence of pulses, and

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~~erasing the recorded marks being erasable by irradiating the information layer record carrier with an erase radiation beam, wherein said erase radiation beam between two successive sequences of pulses for writing marks consists of comprising three consecutive erase periods, and~~

wherein said erase radiation beam has a first erase power level for a first erase period followed by a second erase power level higher than said first erase power level for a second erase period followed by a third erase power level lower than said first erase power level for a third erase period.

15. (New) The method of claim 14, wherein the marks represent data including a high period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

16. (New) The method of claim 14, wherein the marks represent data including a high period and a low period, and wherein the three erase periods substantially fill the low period.

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17. (New) The method of claim 1, wherein the data includes a high period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

18. (New) The method of claim 1, wherein the data includes a high period and a low period, and wherein the three erase periods substantially fill the low period.

19. (New) A recording device comprising:

means for irradiating a record carrier with a radiation beam to record a mark; and

means for erasing recorded marks by irradiating the record carrier with an erase radiation beam comprising three erase periods;

wherein the erase radiation beam includes a first erase power level for a first erase period followed by a second erase power level higher than the first erase power level for a second erase period, followed by a third erase power level lower than the first erase power level for a third erase period.

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20. (New) The recording device of claim 19, wherein the recorded marks represent data include a high period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

21. (New) The recording device of claim 19, wherein the recorded marks represent data include a high period and a low period, and wherein the erase radiation beam includes pulses that substantially fill the low period.

22. (New) A recording device comprising a controller configured to:

irradiate a record carrier with a radiation beam to record a mark; and

erase recorded marks by irradiating the record carrier with an erase radiation beam comprising three erase periods;

wherein the erase radiation beam includes a first erase power level for a first erase period followed by a second erase power level higher than the first erase power level for a second erase



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period, followed by a third erase power level lower than the first erase power level for a third erase period.

23. (New) The recording device of claim 22, wherein the recorded marks represent data include a high period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

24. (New) The recording device of claim 22, wherein the recorded marks represent data include a high period and a low period, and wherein the erase radiation beam includes pulses that substantially fill the low period.

25. (New) A method of recording marks on a record carrier, the method comprising the acts of:

irradiating the record carrier with a radiation beam, each mark being written by a sequence of pulses; and

erasing recorded marks by irradiating the record carrier with an erase radiation beam;

wherein the recorded marks represent data including a high

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period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

26. (New) The method of claim 25, wherein the erase radiation beam includes pulses that substantially fill the low period.

27. (New) A recording device comprising a controller configured to:

irradiate a record carrier with a radiation beam to record a mark; and

erase recorded marks by irradiating the record carrier with an erase radiation beam;

wherein the recorded marks represent data including a high period and a low period, and wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

28. (New) The recording device of claim 27, wherein the erase radiation beam includes pulses that substantially fill the low period.

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29. (New) A method of recording marks on a record carrier, the method comprising the acts of:

irradiating the record carrier with a radiation beam, each mark being written by a sequence of pulses; and

erasing recorded marks by irradiating the record carrier with an erase radiation beam;

wherein the recorded marks represent data including a high period and a low period, and wherein the erase radiation beam includes pulses that substantially fill the low period.

30. (New) The method of claim 29, wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.

31. (New) A recording device comprising a controller configured to:

irradiate a record carrier with a radiation beam to record a mark; and

erase recorded marks by irradiating the record carrier with an erase radiation beam;

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wherein the recorded marks represent data including a high period and a low period, and wherein the erase radiation beam includes pulses that substantially fill the low period.

32. (New) The recording device of claim 31, wherein a start of the erase radiation beam substantially coincides with a beginning of the low period.